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# Worldwide Report

EPIDEMIOLOGY

No. 280

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27 May 1982

## WORLDWIDE REPORT

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REPORT NOTES STATUS OF VARIOUS DISEASES IN CARIBBEAN

Bridgetown ADVOCATE-NEWS in English 24 Apr 82 p 9

[Text]

The Caribbean Epidemiology Research Unit (CAREC) has pointed to the low state of immunisation for polio in many regional countries and the consequent danger of an outbreak of the disease.

The warning was contained in one of the reports presented at the 27th meeting of the Caribbean Medical Research Council held recently in Trinidad and Tobago. Some 664 reports were presented.

The resurgence of endemic malaria in the Caribbean was also documented, and the report emphasised the need for control of mosquitoes to prevent the spread of the disease.

It added that control of mosquitoes was also important in preventing the resurgence of dengue fever which was epidemic in a number of territories in the region last year, and which led to many deaths in Cuba.

Two outstanding doctors were recently honoured for their work. Dr. Waterlow, a member of the research council, was elected a Fellow of the Royal Society in Britain and Director of the Sickle Cell Anaemia Unit. Dr. Graham Sergeant, was made an Honorary Professor of Medicine in the University of the West Indies.

Work is still continuing on defining the common problem of leptospirosis, with its still high mortality rate of one in five persons. The report said work was pointing to the need for more rapid diagnosis, particularly in the elderly and the high risk of fatality in some persons who do not initially appear to be very ill.

It was also noted that there is jaundice in 80 per cent of the children born in Barbados, most of whom easily recover. However, it was pointed out that there were significant numbers due to blood group incompatibility and red cell enzyme deficiency.

CSO: 5400/7548

## BRIEFS

VACCINE THEFT INCREASES EPIDEMIC THREAT--Ndjamena is experiencing some very strange moments during which rashness and immorality are getting on famously. But it is difficult to explain the theft which took place the past weekend in the warehouse of the department of major endemic diseases. A freezer holding thousands of vaccines was emptied of its contents before being carried away by unknown persons. All that in broad daylight, without forcing the door and a few feet from the police station. A freezer of this size could not go unnoticed. The thieves, if the authors of this absurd vandalism can be called certainly "operated" by car. Vehicle tracks were discovered in front of the warehouse. The consequence of this theft was immediate: thousands of vaccines (anti-tetanus, anti-cholera, BCG, anti-measles, etc....) are henceforth unusable. Although it is difficult for the moment to evaluate the number of vaccines destroyed, it can at least be asserted that thousands of individuals will be deprived of vaccination. If the partial shutdown of the services of the department of major endemic diseases is added to it thus contributing additional difficulties to the precarious struggle which the department of public health is conducting against the epidemics which are raging in Chad, this act is a matter of very simple criminality. And as such its authors deserve to be sent before a court martial. [Text] [Ndjamena INFO TCHAD in French 29 Apr 82 p 4]

CSO: 5400/5982

## BRIEFS

TUBERCULOSIS EPIDEMIC--Monteria, 21 April--A tuberculosis epidemic has spread to several regions of Cordoba. It was learned that the scourge has broken out amongst the inhabitants of Ayapel, Montelibano and the indigenous reservation of San Andres de Sotadentro. Civic leaders in the aforementioned localities said that about 20 people died as a result of this illness and they called upon the sanitation authorities in Cordoba to begin a campaign to avoid further spreading of the disease. [Text] [Bogota EL SIGLO in Spanish 22 Apr 82 p 2] 9908

CSO: 5400/2143



# MOSQUITO EXTERMINATION PLAN FOR HAVANA DISCUSSED

Havana GRANMA in Spanish 10 Apr 82 p 3

[Article by Susana Lee]

[Text] Plans are outlined for the implementation of the drainage and sanitation campaign and the intensive anti-mosquito project in Havana City.

It will begin Monday.

They seek cooperation from labor centers and the people.

A meeting was held to make known the details of the national drainage and sanitation campaign and of the intensive anti-mosquito project in the capital of the country. It was presided over by Manuel Villamar, member of the party's executive bureau in the province, and Jose R. Perez Valdivia, of the provincial executive committee of the People's Government.

Uvelino Moreno, provincial director of sanitation and epidemiology, reported on both campaigns, to take place in two stages. The first begins next Monday, 12 April, and will end on 17 May. Speaking generally, it includes fumigation of nondomiciliary buildings with Leco equipment, drainage and petrolization of ditches, culverts, and other targets, and the drainage and sanitation of enterprises and entities budgeted with their own means. The second, an intensive one, will begin on 17 May and will conclude on 26 June, during which time nondomiciliary fumigation will be continued. Focal and perifocal treatment will be implemented with portable sprayers and sprayers in 100 percent of the homes and premises, and drainage and sanitation of homes, schools, their surroundings, and empty lots will take place.

Villamar specified that the objectives are: to assure the sanitation of homes, empty lots, work centers, and educational institutions, and the removal of refuse and useless articles from surroundings; to expedite and to extend the coverage in order to eradicate the "Aedes aegypti" and to decrease the infestation of other species of mosquitoes that cause public diseases in the rainy season and that can act as potential vectors of transmissible diseases.

Their objectives also include incorporating, in the fifth cycle of the current national program for the eradication of the "Aedes aegypti," perifocal treatment

with "Baytex," which will be carried out along with the verification and destruction of foci. This is now being done through inspection and focal treatment with "Abate"; "adulticida" treatment with portable sprayers and intradomiciliary, peridomiciliary (courtyards and corridors) and extradomiciliary Leco equipment; petrolization and drainage, and further education of the people regarding sanitation.

In connection with drainage and sanitation, arrangements have been made for the collection and final disposal of rubbish and useless articles, covering, and cleanliness of courtyards, gardens, and empty lots; canalization of rivers, ditches, small streams, and brooks that run through cities and towns; removal of all unnecessary containers that can hold water; removal and destruction of all tires that are outdoors, and the covering of all open water tanks that cannot be removed.

Finally, cooperation was sought from labor executive boards and sections of firms, budgeted entities, and organizations in general to adopt appropriate sanitation and cleanliness measures so that their premises may be drained and cleaned on 17 May. Cooperation was also sought from the people who, through the CDR [Committees for the Defense of the Revolution], will be mobilized during the second stage in behalf of the cleanliness and sanitation of their homes, courtyards, and empty lots.

8255

CSO: 5400/2140

## HIGH INCIDENCE OF TUBERCULOSIS AFFECTS NORTHERN REGION

Athens 1 AVGI in Greek 22 Apr 82 p 3

[Article by G. Karambelas]

[Excerpts] At least 4 out of every 100 inhabitants of the Evros, Komotini and Xanthi nomos suffer from tuberculosis, according to data provided by special scientists, while in the rest of Greece, the disease that used to greatly affect our people immediately after World War II is disappearing, with tuberculosis patients' percentages hovering around the 0.4 to 0.5 percent mark.

Official data show that the percentage of tuberculosis patients in Thraki is about 1 percent. However, this number only represents the data available from the area's antituberculosis centers and the results of X-ray tests performed on the local population by the Athens Institute for Chest Diseases Research.

The last X-ray campaign (which was not completed due to the draft) took place in 1974, while the percentage of the local population which was vaccinated against tuberculosis does not exceed 15 percent.

The officially accepted numbers of tuberculosis cases in Thraki, tuberculosis specialist Moustakas notes, do not correspond to reality for two main reasons:

1. In an attempt to keep their condition secret, tuberculosis sufferers only visit specialists at the local antituberculosis center too late.
2. Physicians in every field treat tuberculosis without having the means to do so properly and avoid reporting tuberculosis cases to the local social policy centers (public health directorates) as required by law.

Thus it can be noted that even today, the Alexandroupolis hospital is caring for tuberculosis patients in totally unrelated clinics, while the hospital does have a fully equipped antituberculosis department.

Mr Moustakas states that only 10 out of the approximately 300 physicians practicing in the Evros and Komotini nomos have sent tuberculosis data to the appropriate centers within the last 5 years, while it is widely known that most of them occasionally treat the disease.

Nea Vyssa near the border with Turkey--population 4,500--is the village presenting today the largest percentage of tuberculosis cases in the region and perhaps in all of Greece. The president of the community states: "Because of the high humidity, the swamps and poplar trees growing in the region, about 12 out of every 100 residents are having trouble with tuberculosis."

A walk through Nea Vyssa shows an incredible spectacle: stagnant water throughout, houses built in the middle of dirty water, children playing in and out of the dangerous water. One gets the feeling of being somewhere in the Far East in an aquatic village. Dr Anastasis Kaissianos, a rural physician, explains that even if tuberculosis is not in an active stage, such a problem is faced by 45 out of every 100 persons over 60, 10-15 of every 100 between the ages of 40 to 60, and 5 of every 100 under 40 years of age.

Kr Kaissianos concludes by saying that "measures must be adopted to drain the swamps and cut down all the poplar trees, which are the main factors contributing to the spread of the disease."

(SO: 5400/5323

## BRIEFS

**HEALTH CARE PLAN**--Minister of Health Van West Charles revealed in Parliament yesterday a programme of community health care that features multi-level attention for the sick, an emphasis on sanitation and health, an improvement of the doctor to population ratio, the continuance of the hospital and other health facilities construction programme and a greater amount of work at the community level. The Minister explained that the new health care system would function to ensure that minor cases were treated at level one (which requires basic medical attention) and through a system of referrals. Patients with graver problems would be given treatment demanding higher level of specification. Restaurants and eating houses would come under special scrutiny this year and the hospitals at Charity and Coomaka will come on stream while Mibicuri goes into operation in the not so distant future. Dr Van West Charles made the point that drugs should be in better supply this year. [Text] [Georgetown GUYANA CHRONICLE in English 3 Apr 82 p 1]

**OUTBREAK OF MALARIA**--There are fresh reports on an outbreak of malaria in the Rupununi in the hinterland among the Amerindian people. Indications are that the disease has taken a firm grip on the Rupununi area. Our correspondent writing from Morawaunau Village said: "Already for 1982 five persons have died of the disease. There are no doctors or medicines available to residents. In one day two persons died in the South Rupununi. Two babies were also affected with malaria, and the general tendency is for the disease to spread. At the moment, some 50 persons are down with it. Village elders feel that the disease is taking on epidemic proportions and are therefore annoyed at the central government for procrastinating over the issue. They are calling for prompt action to prevent a further deterioration in the situation." The correspondent went on to say that there is an absence of Health Centres and the South Rupununi area generally has a problem of acute drug shortage and also shortage of essential medical facilities. All the Amerindian people receive are promises and more promises. The outbreak of malaria in the Rupununi is traceable to neglect by the PNC regime which has not been supplying the border areas with medicated salt. This is an essential ingredient to control malaria as recommended by the World Health Organisation. The movement of persons to and fro across the border could be responsible for the fresh rise of malaria from which under the PPP government Guyana was once free. [Text] [Georgetown MIRROR in English 4 Apr 82 p 3]

DIARRHEA, MALARIA, MEASLES OUTBREAK

Monrovia DAILY OBSERVER in English 26 Apr 82 p 3

[Text]

Three persons have reportedly died as a result of a recent outbreak of diarrhea and malaria in Gonerlor Town, Tewor District, Grand Cape Mount County.

Those believed to have died of diarrhea are, Siafa Massaley and his wife Beh Gbessay. A madam Hawah Dabor reportedly died of malaria.

This was disclosed to the Liberia News Agency at the weekend by the Medical Director at the St. Timothy Hospital in Robertsport Doctor N. Sillah.

After the incident, a team of medical experts headed by Doctor Titus A. Kolawole including

Miss Louis Hayes, in-service training coordinator for Grand Cape Mount County, visited the area to investigate the cause of the three deaths.

At the end of the investigation, Doctor Sillah said it was established that the town's drinking water supply was conducive for human consumption and that cholera could not be the cause of the deaths.

Meanwhile, signs of measles have been discovered in the area, and efforts are now being made to immunize inhabitants in the entire town, including surrounding villages, against the disease. LINA

020: 5400/5977

MALAYSIA

BRIEFS

CHOLERA CASES IN SARAWAK--The Medical Services Department in Kuching announced on 7 May that the number of cholera cases in Sarawak had risen. Another five new cases had been confirmed in the 6th division bringing the total number of confirmed cases to 16. The number of confirmed carriers remained at 13. [BK090238 Kuala Lumpur Domestic Service in English 1130 GMT 7 May 82]

CSO: 5400/5978

## FIRST AUTHORITATIVE STUDY OF DISEASE ORF COMPLETED

Christchurch THE PRESS in English 9 Mar 82 p 7

[Text]

The Health Department has completed a study of orf, the disease caught by humans from sheep infected with scabby mouth, and its report will be the first complete and authoritative study of orf in the world.

The deputy director (occupational health) of the department's Division of Public Health, Dr John Stoke, said that a team in the department working with the veterinary faculty of Massey University, had just completed the field work throughout New Zealand, and the report would be published in May.

Our policy is to keep under review all occupational health problems, and our chief priority is agricultural health, he said.

When the report was completed it would outline the incidence of orf in New Zealand, how humans are infected, and recommendations for the treatment and prevention of the disease.

One of the first outbreaks in New Zealand was in 1956, when five people were affected in a virus research

department. The outbreak was reported in the "New Zealand Medical Journal".

The Health Department's annual report to Parliament has not named the disease in the past. It has been classified in the same group as two other more common diseases affecting agricultural workers, leptospirosis and brucellosis, but has been put under the heading "other".

In 1974, only two cases of orf were reported. In 1975, there were five. In 1978, 47 cases were reported, followed by 68 in 1979, 121 in 1980, and a similar number last year.

Dr Stoke said that the increase in the number of cases reported did not necessarily mean that more people were being affected. It could reflect a growing awareness of the disease and better recognition of its symptoms.

Orf usually infects humans through cuts or abrasions, usually on the hands touching sheep infected with scabby mouth. After an incubation period of 10 to 14 days, a

small white blister develops, enlarges, and fills with fluid. In most cases it gradually disappears in the next three to six weeks.

The Health Department official warned in an article in the "New Zealand Journal of Agriculture" in 1964 of the danger of humans getting the virus from sheep affected by scabby mouth, and advised people handling diseased sheep to wear rubber gloves or wash their hands frequently.

The International Labour Organisation's "Guide to Health and Hygiene in Agricultural Work" describes orf as contagious ecthyma. It recommends disinfection of abrasions and cuts after infected sheep have been handled and the use of protective gloves and clothing to prevent catching the disease.

Vaccine can be used to prevent the spread of the disease among sheep in a flock on the farm, but the I.L.O. guide says it is not appropriate for humans because it produces similar effects as the disease itself.



**SURVEY SHOWS POLYNESIANS MORE SUSCEPTIBLE TO GONORRHEA**

Wellington: THE EVENING POST in English 29 Mar 82 p 17

[Text]

**Maori and Island women have been shown to be more susceptible to gonorrhoea in a survey carried out among patients at the Auckland venereal disease clinic.**

The survey involved 148 women who went to the clinic with gonorrhoea over a five-month period.

Dr F E Willmott, a consultant venereologist at Auckland Hospital, who has published his study in the New Zealand Medical Journal, said the incidence of gonorrhoea among Maoris and Islanders was higher than would be expected from the population levels.

Eighty-eight of the women were European, 44 were Maori and 16 were Islanders.

In percentage terms this meant that 30 percent of the women were Maoris, compared with a general Maori population of 8.3 percent in Auckland, and 11 percent were Islanders, compared to the Auckland population of 4.8 percent.

In an interview, Dr Willmott said it was general-

ly believed that different races were more susceptible to gonorrhoea and these were often coloured races.

## Pattern

He said studies had been done in the United States which had confirmed this and his study was the first attempt to show a similar pattern in Auckland.

"We suspected, but we didn't know," he said. "It was really to give us some idea."

He said the survey had shown the need for more effort in educating Maoris and Islanders about venereal disease.

Sixty-nine percent of the women in the survey were under the age of 25 and 23 percent were unemployed. Most women had gone to the clinic as a contact of a man who had gonorrhoea.

: 6400/9080

## BRIEFS

**LISTERIOSIS CASES**--A rare disease, listeriosis, which affects pregnant women and new-born babies has been reported to the Health Department in Christchurch. Two cases of listeriosis were reported last week and the Deputy Medical Officer of Health, Dr M. A. Brieseman, fears that they could be the beginning of a big outbreak. Normally only six cases of the disease are reported each year in New Zealand. An outbreak last year saw 14 cases reported in Christchurch. Dr Brieseman said that a pregnant woman would only notice the disease as an attack of flu but it could cause the baby to be aborted, a stillborn child, or a born with severe meningitis. Listeriosis could be treated if diagnosed by a special blood test. Pregnant women should see their doctor if they were in any doubt, he said. Because the disease was carried by a wide range of animals, pregnant women should avoid contact with animals, he said. "If contact is necessary, strict hygiene should be observed." [Text] [Christchurch THE PRESS in English 16 Mar 82 p 3]

**LEPTOSPIROSIS VACCINE**--Staff Reporter Whangarei--A vaccine for humans against leptospirosis developed in Australia may be put on trial in Northland. The trial would be carried out by a working party on preventable disease established by a development group of the Northland Health Services advisory committee. A member of the group Mr Peter Brown, said the trial would go ahead subject to satisfactory trials in Australia and the necessary approvals being obtained. Leptospirosis is a disease that can be contracted from farm stock. Animals, not humans, are vaccinated against the disease now, Mr Brown said. But if farm workers could be vaccinated it would prove a far less expensive method of control. Discussions about a possible trial might be held with a senior research fellow of Monash University of Melbourne, Dr B. Alder, when he visits New Zealand in May. Between 40 and 80 confirmed cases of the disease are reported a year among about 3000 dairy farm workers in Northland. [Text] [Auckland THE NEW ZEALAND HERALD in English 20 Mar 82 p 8]

CSO: 5400/9082

## TUBERCULOSIS TOP KILLER IN CENTRAL MINDANAO

Manila BULLETIN TODAY in English 3 May 82 p 10

[Text]

**COTABATO CITY,** May 2 — Tuberculosis has remained the No. 1 killer of adults in the Muslim-populated region of Central Mindanao, according to the Ministry of Health regional office.

An MOH report said that of the close to 1,500 deaths in the region in the first six months last year, 11 per cent was attributed to TB in various stages.

Broncho-pneumonia came in as the second leading cause of mortality in the area with about 10 per cent of the total deaths during the same period traced to the disease.

Other causes of death and their percentages are: pneumonia, 8.09 per cent; gastroenteritis, 7.69 per cent;

senility, 5.15 per cent; violence and accident, 4.55 per cent; undetermined causes, 3.54 per cent; cardio-respiratory failure, 2.29 per cent; and bronchitis, 1.73 per cent.

The health regional office listed "still births" as the leading cause of infant deaths in Central Mindanao, representing almost 20 per cent of the total infant deaths in the first semester last year.

Second leading cause was broncho-pneumonia which registered 11.96 per cent, followed by prematurity with 10.63 per cent.

Other main causes of infant deaths were pneumonia, 7.71 per cent; tetanus neon-

turum, 7.18 per cent; gastro-enteritis, 6.38 per cent; undetermined causes, 4.52 per cent; bronchitis, 3.98 per cent; asphyxia, 2.65 per cent; and respiratory failure, 1.88 per cent.

The MOH regional office also reported that the No. 1 cause of maternal deaths in the region last semester was post partum hemorrhage which represented 27.56 per cent of the total deaths of local mothers during the period.

Next leading killer of mothers was septicemia with 24.13 per cent, followed by placenta retention, 17.24 per cent; eclampsia, 13.79 per cent; and ectopic pregnancy, 6.89 per cent. (Tony Pa. Rimando)

SHORTAGES OF DOCTORS, NURSES REPORTED

Shortage is 50 Percent

Colombo DAILY NEWS in English 23 Apr 82 p 3

[Text] The country's health services are today run with half the cadre of doctors. There were no doctors to fill the other vacancies said Health Minister Gamani Jayasuriya at a meeting at Uva-Paranagama during the weekend.

The Minister was speaking at the opening of the newly-built AMPs quarters at Wewagama.

He said the shortage was not confined to doctors, but in other categories of health service personnel as well, specially nurses and AMPs.

He was no magician and he had no magic formula to solve these problems. During the last 4 years he had done his best to meet the problems, and he had succeeded in improving the services to some extent.

He did not wish to blame anybody for these problems, yet he felt if the last government had taken some interest to increase the intake of doctors and nurses, the problems would not have been so severe as they were today. He had only 1,500 doctors out of a cadre of 3,000.

Besides obtaining the services of UN volunteer doctors, the government had increased the intake of medical students and pupil nurses, but it would take another two years for them to complete their training, and join the service. He could not ask the people not to fall ill till then.

He felt that the overall development of the economy was vital at the moment, as additional funds were needed to improve services like health and education.

Mr. P. M. Karunaratne MP for Uva-Paranagama also spoke.

Doctors Emigrating

Colombo DAILY NEWS in English 26 Apr 82 p 1

[Text] Government doctors are leaving the country at the rate of 15 to 20 a month and the Health Department is now 760 short of its doctors cadre of 2,260

Currently the four medical colleges at Colombo, Peradeniya Jaffna and Ruhuna provide a total of four hundred new doctors per year.

Increasing the intake is out of the question according to the University Grants Commission. The available facilities are fully utilised.

However by 1985 medical students graduating from the private medical college will also be available and the number of doctor passing annually will rise to 500 per year.

The authorities do not foresee an immediate slow-down of the exodus of doctors abroad.

In the long-term they believe that tighter restrictions on immigrants in Britain and other Western countries might discourage Lankan doctors from leaving the country in the present numbers.

#### Possible 'Standstill' in Nursing Services

Colombo THE ISLAND in English 26 Apr 82 p 1

[Article by L. B. Wijayasiri]

[Text] Government hospitals are likely to be crippled without nurses in the near future if the rate of pupil nurses dropping out of training schools continues.

There is already a big shortage of nurses in state hospitals and the current rate of drop-outs is likely to bring nursing services in hospitals to a standstill.

As reported in 'The Island' last week 400 of 1200 pupil nurses dropped out of training school last year.

The Public Services United Nurses Union has appealed to the Minister of Health Mr. Gamani Jayasuriya to do away with the new system and re-introduce an earlier system of training of nurses at government expense.

Student nurses giving up their studies is attributed mainly to their inability to maintain themselves during their training period.

The Union has also urged the Minister to stop charging students Rs. 25 as electricity charges. The union has suggested that bank loans be made available to pupil nurses to assist them to complete their training.

The last two batches of pupil nurses admitted in 1981 have to pay for the training that they are given and, in addition, have to buy their uniforms as well as pay for their food and lodging.

Rs. 25 per month is charged from each pupil as electricity charges.

Parents of a large number of pupil nurses have found they cannot afford to meet the expenses of this training, and their children had no other alternative but to give up the training half way. At Anuradhapura training school only about 12 pupil nurses have remained to continue their training and all the others have left. In other places, too, a large number of trainees have quit training in midstream.

CSO: 5400/5974

## HANOI REPORTS ON TUBERCULOSIS PREVENTION, TREATMENT

BK041438 Hanoi International Service in English 1000 GMT 4 May 82

[Report from radio feature: "Here and There in Vietnam"]

[Excerpt] One expects to see in war-ravaged Vietnam a marked increase in tuberculosis incidence. But, according to Prof (Nguyen Dinh Huong), an authority on tuberculosis in Vietnam, tuberculosis incidence in this country has dropped by more than 65 percent within 20 years.

Professor (Huong), who is now director of the National Tuberculosis Institute, recalled that organized fight against tuberculosis did not begin in the north until 1957, that is, 3 years after the return of peace, and in the south until 1975, when South Vietnam was liberated. Today, he said, a wide network of anti-TB fight has taken shape in almost all provinces as an integral part of the general health network, especially at the grass-roots level.

In many villages, there are health workers responsible for the vaccination of newborn and ambulatory treatment of patients. Every year, more than 1.5 million newborn babies and children are vaccinated against tuberculosis and between 30,000 to 40,000 new cases are detected, treated and cured. Investigations show that compared with the situation of 20 years ago, tuberculosis prevalence has dropped by more than 65 percent or by two-thirds. Bacillary prevalence, that is, the total number of communicable cases whose sputum contains TB bacilli, is from 1 to 1.5 per million. Bacillary incidence, that is the number of new cases detected in a year, is around 0.6 and 1 per million.

In the pilot zones, after some 5 years of organization and realization of the anti-tuberculosis program, the situation has improved to the extent comparable to that in European countries.

Prof (Nguyen Dinh Huong) said that Vietnam has received aid from many countries and associations in the anti-TB fight. In the '60's Soviet, GDR and Bulgarian specialists came to work in collaboration with Vietnamese physiologists. In recent years, various humanitarian associations, such as the Association Amicale Franco-Vietnamienne [AAFV], the (Medic) Committee Netherlands-Vietnam [MCNV] and the Central Sanitaire Suisse, continued to

provide aid for the Vietnamese anti-tuberculosis service. The AFFV, for instance, has helped Vietnam install a (?reference) bacteriology laboratory at the TB Institute. The MCNA has supplied more than 600 microscopes to equip detection centers at the district level and also a large quantity of medicine.

Prof (Nguyen Dinh Huong), however, noted that in the present conditions of the country, when the tuberculosis incidence is still high, the fight remains an arduous one, especially with regard to the material basis such as drugs, microscopes, radiology equipment, medical products for the coloring of sputum, film, documents and material for sanitary education and also tuberculosis for diagnostic tests and BCG for vaccination.

CSO: 5400/5978



POOR MANAGEMENT, RED-TAPE HAMPER DRUG PRODUCTION

Hanoi NHAN DAN in Vietnamese 18 and 19 Feb 82

[Article by Professor Do Tat Loi: "What Can Be Done To Speed Up the Availability of Medicines"]

[18 Feb 82, p 3]

[Text] The present shortage of medicine is a concern of virtually all patients and their families. The thinking that we lack medicine is actually becoming strong among the people of the entire country.

In the face of this situation, many publications and many authors in the capital and numerous provinces and municipalities have discussed the causes of this situation at great length and proposed many ways to quickly overcome this situation.

One of the measures with which practically all authors are in agreement is the need to accelerate the production of medicine. However, how this can be done is still a matter of debate.

One of the reasons why the production and distribution of medicine have developed slowly and have not kept pace with requirements has been poor management. However, why our management has not been good must be precisely defined; only on this basis can we develop and propose precise measures.

Below are a few of our opinions concerning accelerating the production of medicine and reorganizing the management of the production and distribution of drugs in order to quickly overcome the shortage of medicine and, in addition, implement the guideline of becoming independent as regards medicine so that our medicine industry is not only able to satisfy the medicine needs of the people, but will also provide a more than small source of foreign currency that can be used to meet other needs.

Medicine Production Guidelines

In the past and at present, the guideline on the level that has responsibility and authority has been to decentralize production into the three areas of natural

pharmaceutical materials, pharmaceutical chemicals and antibiotics. This conclusion emerges from the statistical data and costs in the medicine budget in our country: each year, pharmaceutical chemicals (aspirin, sulfanides and so forth) constitute 40 percent of the budget while antibiotics (penicillin, streptomycin and so forth) constitute 30 percent and natural pharmaceutical materials only constitute 30 percent; therefore, those persons who support the guideline of decentralizing drug production in three different areas think that in order to quickly achieve self-sufficiency in medicine, it is necessary to build the pharmaceutical chemical industry and the antibiotic industry together with developing the production of natural pharmaceutical materials because self-sufficiency in these two types of drugs alone would account for 70 percent of the budget while producing 100 percent of the natural pharmaceutical materials as feed would only account for 30 percent of the medicine budget. Some persons also say that even in the Soviet Union, a country that gives very much attention to developing its domestic sources of natural pharmaceutical materials, costs for these materials in the medicine budget only constitute 40 percent. Some 60 percent of the budget must still be spent for pharmaceutical chemicals and antibiotics.

We cannot establish medicine production guidelines within a country on the basis of such statistical cost data.

The realities of nearly 30 years of building a pharmaceutical industry that is decentralized in the three areas mentioned above have shown that building a base and training cadres for the pharmaceutical chemical and antibiotic sectors are very costly and require much time but, in the end, if there are cadres and factories, virtually all of the raw materials and chemicals, even the solutions, needed to operate these factories must be imported at a time when we do not have the necessary foreign currency and do not have a strong position from which to compel other countries to sell us the necessary solutions and chemicals. As a result, the small amount of initial capital we had has been spent in ways that have not yielded prompt economic returns (it must also be clearly stated here that we are using the term "pharmaceutical chemicals" to denote those types of medicines compounded by completely or semi-synthetic methods using raw materials and subsidiary materials, virtually all of which we must still import; the extraction of drugs from plants and animals are still considered by us to be part of the natural pharmaceutical materials industry because, in order to develop an extraction industry, it is first of all necessary to develop the research and cultivation of the plants and animals used to make drugs).

The same applies to the antibiotic industry: although the warm, humid climate of our country is very well suited to the growth of fungi, in order to extract antibiotics from fungi in quantities and quality of necessary scientific and economic significance, we must have an adequate supply of the many different types of chemicals used to make environments and solutions for extraction and must have large fermentation tanks and sophisticated machinery to maintain these environments at a specific temperature and humidity. All of these pieces of equipment, chemicals and solutions require very large costs, are supplied by foreign countries and, as a result, require very large sums of foreign currency. Therefore, it is necessary to make careful calculations and to make certain

persons responsible for everything from proposing specific measures to implementing and observing their implementation. If they succeed, they should be promoted; if they do not succeed, they should be demoted and disciplined.

Even with regard to natural pharmaceutical materials, we must abandon the mistaken concept that we must raise all of the plants and animals used to make drugs that we need. This is impractical and uneconomical. We will not achieve the desired results.

The correct attitude toward natural pharmaceutical materials is that we must select from among those existing plants and animals used to make drugs or those that can be developed in our country a number of plants and animals that are clearly efficacious in the treatment of disease, are in high demand both at home and abroad and are of high economic value; at the same time, we must correctly evaluate the capabilities for expanding their cultivation and set forth specific measures to achieve a level of production of commercial significance within the shortest possible amount of time in order to allocate some of this output to meet domestic needs and allocate the major portion for exportation in order to earn foreign currency with which to trade, on an equal basis, with other countries for drugs, implements and equipment that we do not produce or do not produce very economically. As regards natural pharmaceutical products, particular attention must be given to selecting traditional medicines that primarily utilize special product crops and animals of our country in order to compound unique products that bear the special seal of Vietnam as this is the only way we can avoid worrying about competition (because, we should remember that a number of other tropical countries might have the same plants and animals used to make drugs that we have in our country; however, their methods of processing and using them are, for the most part, different than ours). Therefore, if our drugs are more efficacious, we will not have to worry about competition provided that we always produce the required quantity, maintain their quality and supply them on schedule.

In the past, we did achieve one success in the area of natural pharmaceutical materials but it is regrettable that we did not promptly gain experience in order to develop upon this success. The success involved the cultivation of peppermint plants and the extraction of essential peppermint oil. The peppermint plant, oil of peppermint and menthol are widely used in both Eastern and Western medicine in the form of rubbing oil to treat colds and headaches; oil of peppermint and menthol are also used in the candy industry, in the production of peppermint soft drink and peppermint wine, in the production of toothpaste to disinfect and deodorize the mouth, in the tobacco industry and so forth. The demand at home is large but the demand overseas is even larger because we have compounded and exported to the fraternal countries and other countries tiger balm, which is a special medication of traditional East Asian medicine of which our country is an excellent representative.

Although the demand is large and despite the fact that the peppermint plant easily grows everywhere in our country, until 1972, all the oil of peppermint and menthol

menthol had to be imported. And, in the peppermint products we produced for domestic consumption and exportation, we only played the role of a processor and were totally dependent upon the sources of raw materials purchased from other countries. A number of responsible research agencies had reached the conclusion that our country could not achieve self-sufficiency in oil of peppermint and menthol. However, in 1972, on the basis of the results of dozens of years of research on the peppermint plant, especially the peppermint plants of our country and the rest of the world, we requested permission to undertake this work and received the support and encouragement of the Office of the Premier (now the Office of the Council of Ministers), the Ministry of Public Health, the Ministry of Foreign Trade and many provinces and municipalities, which created the necessary conditions for us; after only 6 years of work, that is, from 1977 on, instead of having to import all oil of peppermint, we not only annually produced a quantity of oil of peppermint equal to the quantity imported by us during the year of largest imports, but also began to export some oil of peppermint and produced a large quantity of menthol, which is surely something that a pharmaceutical plant equipped with very expensive equipment and manned by skilled workers trained overseas could not do in such a short time. By means of developing the production of natural pharmaceutical materials, we produced a better, less expensive pharmaceutical product, produced it more rapidly and produced a product more consistent with the circumstances of Vietnam because, in order to produce the total quantity of menthol that we produced, we would have had to construct a very expensive factory equipped almost entirely with equipment from foreign countries and manned by specialized cadres and workers who would have had to spend a long period of time overseas receiving classroom and practical training. Here, however, we turned the fields of our country into a factory using tropical sunlight and temperatures to synthesize these products and employed our elderly farmers as workers of this "green" factory. If we had gained experience, if we provided better incentive and a better organization, the figure of 500 million jars of Sao Vang ointment that we wanted to produce (on the basis of using raw materials and secondary materials produced almost entirely by us) would surely not be a dream now. And, if we had achieved the production level of 500 million jars of Sao Vang ointment, we would have achieved, for the first time, a very high level of self-sufficiency in drugs. Because, with our present population of more than 50 million, if each person purchases 10 dong worth of drugs per year and these drugs are produced using our manpower, raw materials and secondary materials or acquired through trade, we can be considered to have achieved self-sufficiency in drugs. The experts who made this calculation also maintain that it is only necessary to export 300 million jars of Sao Vang ointment each year in order to have the foreign currency needed to import all the drugs we need.

However, it is very regrettable that, beginning in 1977, the output of oil of peppermint throughout the country, instead of constantly increasing, has constantly decreased.

Very many similar cases can be cited: prior to 1969, all drugs used to treat amebic dysentery and bacillary dysentery had to be imported: e-me-tin, mi-xi-o and xto-vao-xon [Vietnamese phonetics] were imported to treat amebic dysentery, ga-ni-dan [Vietnamese phonetics] and tetracycline were imported to treat bacillary dysentery and en-te-ro-xep-ton [Vietnamese phonetics] was imported to treat

enteritis. As a result of scientific research, we reduced the importation of these drugs by more than 90 percent; however, in just a short amount of time, as a result of irregular and untimely production and distribution and the lack of discipline, the use of imported drugs increased. There are available worm medicines within our country, such as worm oil and the roots and bark of the sand-tree; if their production and distribution were organized well, it would surely help us reduce the present shortage of these types of drugs and save us the large amount of foreign currency now being used to import the worm medicine *ho-ca-rit* [Vietnamese phonetics], a drug concerning which there is no shortage of criticism but which we must continue to import and use because we have no other drug to take its place. It has reached the point where people say that it is more difficult to find our drugs and that they are more expensive than Western drugs. Prior to 1955, all gynecological drugs had to be imported: traditional national medicine could not go without the ingredients of drug formulations that had to be imported and modern medicine had to import the drug ingredients that we did not yet produce. However, at present, after focusing our efforts on this problem, it can be said that we are only dependent upon foreign countries for roughly 10 percent of these types of drugs.

[ 19 Feb 62, p 3 ]

[Text] How Must the Management and Organization of Medicine Production Be Reorganized?

The only way to quickly end the shortage of drugs is to accelerate the production of medicine on the basis of domestic raw materials, subsidiary materials and manpower. At present, however, the persons who are capable of producing medicine are hampered by very many procedures and policies regarding drug production cadres, prices and so forth, which have created many difficulties and obstacles.

In Ho Chi Minh City and a number of provinces and other cities in the South, local doctors (persons who market drugs) are licensed but the pharmacists in the same localities (persons who could produce drugs) are not licensed. There are also doctors and pharmacists who have come from the forest regions or the North who are also not licensed. What are the consequences of this policy? Licensed physicians are not satisfied because they clearly see that their work has no future. To obtain drugs when there is no one outside the staff of the state to prepare drugs, there is no other choice but to encourage the taking of drugs from state warehouses, warehouses which are inadequate in themselves), produce fake drugs or serve as representatives and actively distribute drugs for foreign drug companies (through outdoor markets and drugs sent by relatives overseas). When it was first liberated, Ho Chi Minh City had more than 300 pharmacies and pharmaceutical houses, the specialized skills and ethical qualities of whose pharmacists the state could have used; however, we disbanded these facilities and incorporated them within state agencies but did not provide their pharmacists with jobs; then, due to the shortage of medicine, tens of thousands of persons selling drugs at outdoor markets appeared in all places where fake drugs are made by persons whose level of skill and personal backgrounds we do not know. In the face of negative phenomena, we had to organize



units to manage the medicine market but, despite much time and effort, not many results have been achieved. This is not to mention the problem of patients buying fake medicine, contracting an illness and wasting their money; patients must purchase many types of foreign drugs that we have the ability to supply at lower prices and the quality of which, if not better, is not worse. Consider the following few examples: one box of co-phy-ton [Vietnamese phonetics] from France to treat hepatitis, which is compounded from ac-ti-so [Vietnamese phonetics] paste (a type of medicinal plant that grows very widely in many provinces of our country, especially in Da Lat) costs a patient 90 dong for a package of 60 tablets, each of which contains 0.02 gram of ac-ti-so paste, which amounts to a total of 7,500 dong per kilogram of paste; meanwhile, 1 kilogram of ac-ti-so paste produced in our country only costs 120 to 200 dong. We firmly believe that our pharmaceutical sector can produce pastes of quality at least equal to that of the ac-ti-so from France and at a price only slightly more expensive than the present price. In this way, the foreign currency of relatives overseas could be used to purchase other drugs that we cannot produce or produce at very high cost. Another example is a box of ne-o-co-di-ong [Vietnamese phonetics] cough medicine; patients must pay 90 to 125 dong for a box of 25 tablets, which is an average of 4 to 5 dong per tablet. Ne-o-co-di-ong tablets compounded from tec-pin [Vietnamese phonetics] and codeine are a drug that we have been able to produce for a long time. If we are permitted to produce it and sell it at a cost of 1 to 2 dong or less per tablet, many persons within our pharmaceutical sector can produce this drug in ever increasing quantities and quality and, if provided incentive by the state, we can surely put an end to these unreasonable situations because these are drugs that are compounded primarily from domestic raw materials and subsidiary materials. Who is preventing pharmacists from performing such work? The people and the state are appealing to every intellectual to use their knowledge to produce material wealth for society. However, licensing principles and procedures, policies and regulations that have arisen over a long period of time and our dependency upon foreign aid for drugs and the raw materials needed to make them are restricting the production of our country's pharmaceutical sector.

Even in the North, persons who use drugs compounded from domestic raw materials to treat diseases are awarded and given incentive but the persons who research the production of these drugs from domestic raw materials are not awarded or given incentive. Because, in order to receive an award, it is necessary to file an application and go through very many complex procedures, which affect the self-respect of a person who researches a new drug. Allow us to cite one case: up until 1955, all of the drugs to treat heart ailments in our country had to be imported. In 1955, we researched the extraction from the leaves of rose-laurel plants planted for ornamental purposes in our country of the substance ne-ri-o-lin [Vietnamese phonetics] by means of very Vietnamese methods and, as a result, were able to quickly produce much of this substance well and at low costs. In mid-1965, Dr. Vu Dinh Hai at the Vietnam-Czechoslovakia Friendship Hospital in Haiphong used this drug and received an award of more than 500 dong; to date, however, the persons who researched the production of ne-ri-o-lin have still not been awarded or provided incentive even though the drug is continuing to be produced and used. At present, in addition to ne-ri-o-lin, we are putting many other types of drugs into production, drugs that have the trust of the people and are compounded entirely on the basis of domestic raw materials, subsidiary materials and manpower, such as drugs to treat high blood pressure and gynecological disorders (drug HA-1, injectible, in Hanoi, pan-ma [Vietnamese phonetics] tablets, and "nha dam tu"

to treat dysentery and diarrhea, which are presently being distributed throughout the country); we are continuing to produce these drugs but without ever receiving encouragement or incentive. It is also necessary to state here that scientific researchers, when engaged in research, never work merely for incentive or awards but under the policy of only providing incentive to persons who use drugs while giving light attention to persons who make drugs, who research new, efficacious drugs and who could produce them in large quantities under our present conditions, how is it possible to accelerate the production of drugs as many people desire?

At a time when druggists who are fully educated in the science of modern pharmacy and the drugs of traditional medicine but are not allowed to organize and produce our drugs and traditional national drugs or, if they want to produce these drugs, must go through very many extremely complicated procedures and usually must wait for years for permission to be granted, in the field of the national medicine profession and business, there are virtually no qualifications whatsoever, with sometimes nothing more being required than a certificate stating that one is from a family in which there are one or two traditional pharmacists.

Another problem in management that must be quickly resolved is how to rapidly introduce research results in production and how to produce an increasingly large quantity of higher quality products once these results have been introduced in production. To produce drugs, research must be carried out first. By examining statistics and attending scientific conferences, one sees that there are very many scientific research projects. Scientific conferences usually include exhibits. The new drugs in exhibits are very diverse and interesting. But, one must wait forever to see these drugs on sale. Scientists complain that there are no production facilities that are willing to implement their research projects. Production facilities complain that researchers are unrealistic because they want to use raw materials and subsidiary materials that cannot be obtained and equipment that must be imported; or, no one will act as a subcontractor or subcontracting costs are too high. Drugs cannot be marketed because production costs are too high. Some drugs have been produced but distributors complain that although the drugs are available, doctors do not prescribe them or patients do not feel that they are as effective as stated in the results of research projects, consequently, they do not ask for these drugs. The greatest harm is caused by those provinces that have natural pharmaceutical material corporations or units purchasing these materials that are separated from production enterprises (which have the task of propagandizing and providing instructions in the purchasing of natural pharmaceutical materials raised by the people). Because drugs cannot be marketed, enterprises must cease production, consequently, they do not use the raw materials purchased by the natural pharmaceutical material corporations or units. Notification that purchases have stopped are generally made too late, made after the people have taken their products but found that they will not be purchased (or are purchased after many procedures, tests and a complicated payment process that causes producers to lose much time, which is not to mention the fact that the prices which are paid are usually inaccurate). Once this happens one or two times, the people lose confidence in the agencies of the state; the next time, they are hesitant and cautious regardless of what is said to them and this is the basic problem because they provide a supply of raw materials from agricultural, forestry and fishing sources that are seasonal in nature and must be processed within a certain amount

of time or they will spoil, thereby reducing their quality or rendering them useless as raw materials for the production of drugs. This is not to mention the fact that a number of provinces have raised the prices paid for some species of plants and animals far above market prices but do not purchase them from the people and do not transport citizens to other places so that they can sell their products before their quality declines.

On the basis of the analysis of the situation presented above, in order to quickly resolve the shortage of medicine in a fundamental manner and, if possible, in order to acquire additional sources of foreign currency to meet other needs, we suggest:

1. It is necessary to fully implement the guideline established by the party and state for the pharmaceutical sector, namely, building our country's pharmaceutical industry on the basis of the extremely rich and diverse sources of natural pharmaceutical materials (which include the medicinal plants, animals and minerals used by us to make drugs) as well as the experiences gained in the treatment of disease using the time-honored drugs of our forefathers in order to quickly meet the needs of the people for drugs to prevent and treat illnesses.
2. The organizational structure of the pharmaceutical sector, especially the production of drugs (natural pharmaceutical materials, chemical pharmaceuticals, antibiotics and so forth), must be placed within one scientific, technical and economic sector and must be eligible for the policies and systems that govern high-level industrial sectors which, although small in size, produce products of high use value and high economic value.
3. As long as the production and distribution installations of the state are very weak and do not meet the drug needs of the people, it is necessary to trust the people and creatively apply the guideline of the state and the people working together. We think that the unified management of medicine by the state does not mean centralizing the production of drugs within state agencies, but means stipulating the level of skill and the ethical qualifications of the persons active within the drug production sector and adopting hygienic standards and standards for each type drug. The state should only inspect compliance with these regulations in order to encourage and provide incentive for the entire modern medical sector as well as the entire traditional medical sector to contribute as much as possible to the production of very many high quality drugs for the people.
4. It is necessary to reconsider dividing the activities of the present pharmaceutical sector into natural pharmaceutical material corporations, pharmaceutical corporations and pharmaceutical enterprises as well as the merger of these corporations on the various levels into federations of enterprises in order to avoid surpluses at one place and shortages at another with no one being ultimately responsible for resolving this problem.
5. We must reorganize the College of Pharmacy of Vietnam. To insure that the jobs mentioned above are performed, we must have cadres who are skilled in both theory and practice. The degree to which a project is applied in production should be



used to evaluate and assign work to cadres of the pharmaceutical sector. In production, researching and creating sources of raw materials for the pharmaceutical industry must be the highest standard. For example, we should determinedly replace the head of a department in the pharmaceutical industry who has not put one project into industrial production in the past 10 years or has not helped one province or district produce a new drug on an industrial scale.

The organization and program for the training of the cadres of our pharmaceutical sector still resemble the organization and program of past years and only involve training pharmacists to process and serve as agents distributing drugs and raw materials imported from foreign countries. It is very difficult to assign jobs to pharmacists who are trained in this way. The number of pharmacists that must be trained is very small but the staff of the school cannot be reduced more without influencing the quality of instruction, consequently, many persons have raised the question: "Should the College of Pharmacy become a faculty in another school?" To eliminate this unstable organizational situation, we think that we should organize a school of pharmacy in which, besides the present classroom instruction and laboratories, there are also farms (or cooperatives) that raise the plants and animals used to make drugs, a pharmaceutical shop or enterprise converting available domestic plants, animals or raw materials into drugs and a store introducing and distributing the drugs resulting from the research performed from the school shop. The size of these farms (cooperatives), the shop (or enterprise) as well as the store of the school must be on the scale of model units and must be large enough to actually reflect how these installations would operate in society but not so large that they cannot become a whole enterprise or store; in particular, they cannot be so large that they take raw materials and jobs from existing stores and enterprises, rather, they must serve as models and stimulate the expansion of these enterprises and stores.

Within such a school, teachers and students could engage in instruction and learning while participating in scientific research and production, thereby helping to make medicine for society. By doing this well, we think that, in a short amount of time, society will not have to invest much money in training but will still be able to train good, practical cadres and still be able to conduct scientific research while producing drugs.

We believe that, in the space of 10 to 15 years, by organizing the successful implementation of production guidelines as well as reorganizing management in order to fully tap the zeal and the ability to contribute of the cadres within the sector, our country will not only achieve self-sufficiency in drugs, but will also be able to build, on an independent basis, a complete pharmaceutical sector consisting of natural pharmaceutical materials, chemical pharmaceuticals and antibiotics in order to save many types of drugs for exportation and earn foreign currency with which to import other necessary products.

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CSO: 5400/5889

## BRIEFS

VACCINATIONS FOR RABIES, ENCEPHALOMYELITIS--Elio Peron Mirabal, the director of the Institute of Veterinary Medicine in the region, announced that the first stage of vaccinating against infectious equine rabies will begin in Havana Province on the 17th and 18th, and the second stage on the 24th and 25th of this month. Commissions which will be in charge of the campaign were set up for that purpose in the provinces and in 19 municipalities and will be composed of People's Government which will oversee them, the Institute of Veterinary Medicine, the ANAP (National Association of Small Farmers), the PNR National Revolutionary Police), and other mass organizations. The directorate will get in touch with owners of animals who, on the dates above, should take them to vaccination points between 8 am and 6 pm on Saturdays and from 8 am to noon Sundays. Moreover, it is necessary that all equine species be vaccinated during the first stage, while in the second on the 24th and 25th, only those less than 3 years of age will be given the dosage against rabies along with all dogs that have not been immunized. [Text] [Havana JUVENTUD REBELDE in Spanish 13 Apr 82 p 1] 9908

CSO: 5400/1507

DENIALS OF FOOT-AND-MOUTH DISEASE INCIDENCE

Monrovia DAILY OBSERVER in English 26 Apr 82 pp 1, 10

[Excerpt]

**Reports reaching the Daily Observer that an outbreak of foot and mouth disease was likely in the country because of cattle being brought in from Mali, have been refuted by officials of the Ministry of Agriculture.**

Mr. Levi K. Jones, Chief Inspector at the Slaughter House on the Gardnersville Road, Monrovia, said

in an interview on Friday that foot and mouth disease (FMD) is not present in Liberia today.

CSO: 5400/5977

## BREAKTHROUGH IN FIGHT AGAINST RYEGRASS STAGGERS REPORTED

Christchurch THE PRESS in English 25 Mar 82 p 5

[Text]

PA

Wellington

The Minister of Agriculture (Mr MacIntyre) has announced a breakthrough in the fight against ryegrass staggers, a serious disease affecting sheep and cattle.

Mr MacIntyre said new findings by Ministry research scientists could spell the end of the disease as a serious problem.

Scientists now had strong evidence that neurotoxins produced by a fungus, or by fungus-infected plants, were the cause of the disease suffered by stock on farms every summer and autumn. The research also pointed the way to possible practical control measures.

Ryegrass staggers is a widespread and growing disease which affects animals' co-ordination, and causes millions of dollars of lost agricultural production each year. It can occur any time between December and May.

"Intensive efforts by research teams at Ruakura and Lincoln, based on earlier joint studies by Ministry and DSIR scientists, have found a close correlation between

the incidence and severity of ryegrass staggers and the presence of a parasitic fungus known as *Lolium endophyte*," said Mr MacIntyre.

Trials indicated that while endophyte-infected ryegrass could produce the disease in grazing animals, endophyte-free grass did not, he said.

"Microscopic studies have shown that the fungus is present in the leaf, stem, and seed of perennial ryegrass in many pasture locations. In a major advance, two chemical substances which could be neurotoxins have been extracted from ryegrass seed samples and from ryegrass plants."

The substances, named lolitrem A and lolitrem B, had been isolated through intensive laboratory work. Both had produced symptoms of ryegrass staggers in laboratory animals.

"New fungicides give a measure of control of *Lolium endophyte*, and the viability of the endophyte in ryegrass seed diminishes during prolonged storage," said Mr MacIntyre.

"Effective practical control of ryegrass staggers in grazing livestock could soon be a reality."

CSO: 5400/9081

## FAO TO BRING IN MORE FOOT-AND-MOUTH DISEASE VACCINES

Lusaka TIMES OF ZAMBIA in English 5 May 82 p 7

[Text]

THE Food and Agriculture Organisation (FAO) is working on plans to bring into the country more foot and mouth disease vaccines to combat the cattle-killer disease which has been raging since last year.

FAO representative Mr Hackman Owusu-Agyemang said in Lusaka yesterday the doses the organisation had brought into the country earlier were inadequate to contain the disease.

He said FAO has set out to bring in 400,000 doses, some from Botswana, but this amount was not enough for the campaign.

FAO along with a number of other international organisations were working with the Zambian Government to bring in more doses for the drive.

Mr Owusu-Agyemang said it was one of the responsibilities of FAO to monitor the well-being of livestock and this was why it had been involved in efforts to control the foot-and-mouth disease since the outbreak.

Last Friday Prime Minister Mundia said Zambia needed K501,000 for the eradication of animal diseases in the country.

He said so far 5,000 head of cattle had died from foot-and-mouth and corridor diseases in the Southern Province.

The Prime Minister, who was addressing a crowd which welcomed him when he visited Monze, appealed to international organisations for funds to fight the diseases.

He appealed for co-operation between the public and veterinary officers if the diseases were to be controlled.

FAO has on a previous occasion donated K116,000 in emergency aid to the Zambian Government to combat foot-and-mouth disease.

Announcing the donation in a statement FAO said it would launch two projects worth K501,000 under its food security assistance scheme.

The donation was aimed at supplementing an already ongoing Government campaign for the control of the disease.

The outbreak of the disease in the Southern Province had led to a shortage of beef on the Copperbelt and some parts of the Central and Lusaka provinces.

CORRIDOR, FOOT-AND-MOUTH DISEASE, INCIDENCE, PREVENTIVE MEASURES

Lusaka SUNDAY TIMES in English 25 Apr 82 p 1

[Text]

CORRIDOR, a tick-borne livestock disease, has broken out in Monze district killing 2,531 animals, mostly cattle, acting district governor Mr Nasford Moonde has said.

Speaking in Livingstone when he presented his district's progress report to the provincial development council, which was chaired by Member of the Central Committee for Southern Province Mr Mungoni Liso, Mr Moonde said:

"Unfortunately the veterinary department has not been able to cope with the disease because of lack of funds."

But he said the department had since advised the local people to buy their own dipping chemicals which they accepted.

The district had 13 Government dipping tanks and 19 private ones all in good condition.

The governor said foot and mouth disease, unlike corridor, had not claimed any animal life in his area.

"At present it seems it has been overcome by the veterinary department. About 54,000 animals have been vaccinated while 53,000 have been booster-vaccinated against the disease."

Meanwhile, livestock movement has been prohibited in Mumbwa district because of an outbreak of foot and mouth disease.

This is contained in the Government Gazette prohibiting such movements except with a special permit from a veterinary officer.

## BRIEFS

FOOT-AND-MOUTH ERADICATION SURVEY--The Ministry of Agriculture and Water Development is waiting for data on a survey to determine the effectiveness of the eradication campaign of foot and mouth disease in Southern Province, Minister of State Mr Justin Mukando said yesterday. A team from the ministry had been sent to the province to assess the situation and find effective means of combating the disease which had spread to Mumbwa in the Central Province. He said the survey team had already completed work and was expected to submit its report today. His counterpart in the ministry Mr Noah Dilamonu said earlier this year that Zambia would need more funds if the disease was to be wiped out. Mr Dilamonu said this when he announced that the Government had bought cattle vaccines worth K88,000 from Kenya to fight the disease in Monze, Choma, Mazabuka and Namwala where it first broke out. Mr Mundai said in Monze on Thursday that the country would need about K900,000 to eradicate animal diseases. He said 5,000 herds of cattle had died since the foot and mouth and corridor diseases broke out. He appealed to international organisations for help in the fight against the diseases and urged the people to cooperate with veterinary officials who were striving to control the spread of the disease. [Text] [Lusaka TIMES OF ZAMBIA in English 3 May 82 p 1]

CSO: 5400/5975

## BRIEFS

NGHIA BINH RICE INFESTATION--More than 10,000 hectares of rice in Nghia Binh Province have been damaged by stem borers, leaf rollers, rice gall fly, root suffocation disease and rats. The province's agriculture sector has strengthened and provided guidance to the members of 350 crop protection units in the various localities in how to prevent and control pests by many integrated measures, only using chemicals when necessary. The cooperatives have unified the management and use of pesticides and not distributed them to groups and laborers cultivating fields under contract. The crop protection stations of the districts and cities have selected 17 sites from which to monitor the pest situation. The province has supplied to cooperatives 200 tons of pesticide and 200 spray tanks. Many localities in which rice crops have been heavily damaged have delineated the affected areas and mobilized labor, supplies and pesticide to effectively eradicate pests. The districts of Mo Duc, Hoai An and Nghia Hanh, in which much rice has root suffocation disease, have applied additional phosphate fertilizer and lime, weeded rice an additional time and applied mud to rice. As a result, the cooperatives and production collectives have saved 10,000 hectares of rice from pests. [Excerpt] [Hanoi NHAN DAN in Vietnamese 21 Feb 82 p 1] 7809

RICE INFESTATION--In Tien Giang Province, pests have developed on the main plantings of winter-spring rice; as of 10 February, more than 25,000 hectares (nearly 38 percent of the area sown and transplanted) in the province were infested by pests, with 14,800 hectares, primarily in the districts of Cai Lay, Cai Be, Chau Thanh and Cho Gao, being heavily infested. The Agriculture Service, together with the various districts, has supplied pesticides to farmers and instructed them in ways to control pests and prevent them from spreading. Tien Giang has mobilized 10,000 mandays to build small-scale water conservancy projects and promptly provide irrigation water to 1,000 hectares of rice in the two districts of Cai Lay and Cai Be. [Excerpt] [Hanoi NHAN DAN in Vietnamese 18 Feb 82 p 1] 7809



THAI BINH HARMFUL INSECTS--Thai Binh Province has saved 5,000 hectares of 5th-month spring rice from being ravaged by harmful insects. Leaf rollers and brown leafhoppers have appeared in many districts and the province is launching a 20-day campaign to eradicate them. Cadres from the Vegetation Protection Department and the water conservancy sector have coordinated with the province's agricultural cadres in carrying out this campaign triumphantly. [BK090211 Hanoi Domestic Service in Vietnamese 2300 GMT 7 May 82]

BINH TRI THIEN HARMFUL INSECTS--Le Ninh District, Binh Tri Thien Province, has recently saved 13,350 hectares of winter-spring rice from being ravaged by harmful insects, mostly ground beetles. The province is launching a campaign to eradicate all kinds of harmful insects to save ricefields and fulfill its plan norms for the winter-spring crop. [BK090211 Hanoi Domestic Service in Vietnamese 2300 GMT 6 May 82]

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